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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,756	03/24/2004	Sung Chul Shin	20010.000700/WA-410/US	4298

7590 05/31/2006

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EXAMINER
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MACKEY, JAMES P

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/807,756

Applicant(s)

SHIN ET AL.

Examiner

James Mackey

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/28/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Art Unit: 1722

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 3 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 3, “the grooved oil channels” lacks proper antecedent basis as a plurality, since claim 1 only requires a single grooved oil channel.

In claim 19, line 2, “the control means” lacks proper antecedent basis in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

Art Unit: 1722

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (U.S. Patent 4,645,443) in view of Japanese Patent Document 4-216906.

Aoki discloses the mold clamping apparatus substantially as claimed, comprising a clamping cylinder 5 including a front close contact portion and a rear non-close contact portion, the clamping cylinder also including a front sealing portion having a through hole portion; a clamping ram 6 slidably coupled with the clamping cylinder and having a first oil channel and a booster cylinder 62, the clamping ram including a central ram portion, a front ram portion and a rear ram portion, the central ram portion supporting a sealing O-ring and also including a tapered portion adjacent to the front ram portion (as clearly shown in Figure 5), the front ram portion extending through the through hole portion of the front sealing portion of the clamping cylinder, the rear ram portion housing the booster cylinder; a booster ram 64 slidably coupled with the booster cylinder and having a second oil channel, the booster ram fixed to the clamping cylinder via stationary section 63 outside the clamping cylinder; a moving platen 4 coupled with one end of the clamping ram via an adjustable fastening element 7 cooperating with coupling projections at the front end of the clamping ram; a stationary platen 2 opposing the moving platen; and first and second oil ports forming in the non-close contact portion and the close contact portion, respectively, of the clamping cylinder (as clearly shown in Figure 5), inherently including oil control means for feeding oil into the clamping cylinder from the first port. Aoki does not disclose the clamping cylinder having a uniform inside diameter wherein the rear portion

Art Unit: 1722

includes grooved oil channels for transfer of oil from the front portion of the clamping cylinder to the rear portion of the clamping cylinder while the central ram portion of the clamping ram is positioned in the rear portion of the clamping cylinder.

Japan '906 discloses a hydraulic mold clamping apparatus comprising a clamping ram 2 slidably coupled to a clamping cylinder, the clamping ram including a booster cylinder cooperating with a booster ram 6 fixed to the clamping cylinder, wherein the clamping cylinder has a uniform inside diameter and includes a front close contact portion and a rear oil channel portion which has arc-shaped grooved oil channels 7 radially arranged at a uniform interval (see Figure 2) for communication of oil from the front portion of the clamping cylinder to the rear portion of the clamping cylinder when the clamping ram portion 5 is positioned in the rear portion of the clamping cylinder. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Aoki by providing the clamping cylinder of a uniform inside diameter with grooved oil channels in the rear portion, as disclosed in Japan '906, since such were equivalent means for oil communication between the front and rear portions of the clamping cylinder. With regard to the particular adjustable fastening element (claims 17-18) cooperating with the coupling projections at the front end of the clamping ram, it would have been obvious and well within the level of ordinary skill in the art at the time of the invention to modify Aoki by providing either half nut chucks or a bayonet-type fastening element instead of the rotary threaded fastening element disclosed in Aoki, since such are conventional fastening elements for permitting adjustable fastening. With regard to the position sensor (claims 12-13), such are well known and conventional in the clamping art for facilitating automatic operation of

Art Unit: 1722

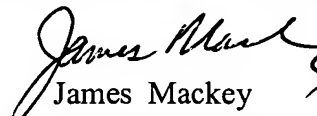
the clamping apparatus, and it would have been obvious to a skilled artisan to modify Aoki by utilizing such a conventional position sensor in order to facilitate automatic machine operation.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
James Mackey  
Primary Examiner  
Art Unit 1722  
5/27/06

jpm  
May 27, 2006